

Title (en)

AUTOMATIC WELDING FILTER WITH TUNABLE SPECTRAL TRANSMISSION

Title (de)

AUTOMATISCHES SCHWEISSFILTER MIT ABSTIMMBARER SPEKTRALÜBERTRAGUNG

Title (fr)

FENÊTRE DE SOUDAGE AUTOMATIQUE DOTÉE D'UNE TRANSMISSION SPECTRALE RÉGLABLE

Publication

**EP 2807508 A4 20150902 (EN)**

Application

**EP 13743198 A 20130115**

Priority

- GB 201201164 A 20120125
- US 2013021512 W 20130115

Abstract (en)

[origin: GB2498726A] The present invention relates to an automatic welding filter that changes from a light transmission state to a dark transmission state in response to incident welding light and includes a colour-tunable filter whose spectral transmittance can be varied to optimise the visual appearance of a welding task. The colour-tunable filter comprises at least one low twist liquid crystal cell disposed between polarisation filters having substantially parallel polarisation directions. The user is able to adjust the colour of the automatic welding filter in the dark transmission state, independently of the shade, in response to a user-selected colour signal which alters the birefringence properties of the low twist liquid crystal cell.

IPC 8 full level

**G02B 5/20** (2006.01); **A61F 9/06** (2006.01)

CPC (source: EP GB US)

**A61F 9/06** (2013.01 - GB); **A61F 9/065** (2013.01 - GB); **A61F 9/067** (2013.01 - US); **G02F 1/13338** (2013.01 - US); **G02F 1/133509** (2013.01 - GB); **G02F 1/133512** (2013.01 - US); **G02F 1/133528** (2013.01 - US); **G02F 1/1347** (2013.01 - EP US); **G02F 1/23** (2013.01 - US); **A61F 9/065** (2013.01 - EP US); **G02F 1/13318** (2013.01 - US); **G02F 1/133531** (2021.01 - US); **G02F 1/1398** (2021.01 - EP US); **G02F 2203/055** (2013.01 - EP US)

Citation (search report)

- [IY] US 6273571 B1 20010814 - SHARP GARY D [US], et al
- [YA] US 2001017681 A1 20010830 - HORNELL AKE [SE], et al
- [YA] US 5208688 A 19930504 - FERGASON JOHN D [US], et al
- [A] US 4867536 A 19890919 - PIDSOSNY RICHARD A [US], et al
- [A] US 4728173 A 19880301 - TOTH PETER [SE]
- [A] WO 9106888 A1 19910516 - UNIV COLORADO FOUNDATION [US]
- [IA] HOLLAND C E: "New technologies improve passive LCDs and expand design flexibility", WESCON/97. CONFERENCE PROCEEDINGS SANTA CLARA, CA, USA 4-6 NOV. 1997, NEW YORK, NY, USA,IEEE, US, 4 November 1997 (1997-11-04), pages 150 - 159, XP010254377, ISBN: 978-0-7803-4303-0, DOI: 10.1109/WESCON.1997.632331
- See references of WO 2013115970A1

Designated contracting state (EPC)

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